

ORIGINAL ARTICLE

## The 7 Ps of marketing and their influence in the commercial management of CITEs from Peru's agro-industrial sector

### ABSTRACT

The main objective of this research was to determine the influence of the 7 Ps of marketing in the commercial performance of public agro-industrial CITEs in Peru. However, the non-implementation of the 7 Ps of marketing by the Centers of Productive Innovation and Technology Transfer (CITE by their Spanish initials) negatively affects their commercial performance. To help improve this problem situation, an experimental study was conducted, where the 7 Ps of marketing were devised and implemented for two agro-industrial CITEs from Peru: CITE Huallaga UT Ambo and CITE Agroindustrial UT Huaura. To achieve an effective design of the 7 Ps of marketing, the results of a situational analysis of these CITEs was considered, as well as the needs and wants of their target audience. After conducting this research, it was concluded that the CITEs which implemented the 7 Ps of marketing had a better performance in the placement of technological services and an increase in the number of agro-industrial companies served, compared to previous years and to other agro-industrial CITEs which did not implement the 7 Ps of marketing.

**Keywords:** 7 Ps of marketing; commercial performance; target audience.

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## INTRODUCTION

The Technological Institute for Production in Peru, by means “de los Centros de Innovación Productiva y Transferencia Tecnológica buscan garantizar el cumplimiento de las normas técnicas, buenas prácticas y estándares de calidad en las empresas” [of the Centers for Productive Innovation and Technological Transfer, seeks to guarantee compliance with standards, best practices and quality standards in companies]. (Instituto Tecnológico de la Producción, n.d., par. 2). According to the website of the Technological Institute for Production, Peru currently has ten public agro-industrial CITEs, which are mostly managed by agro-industrial engineers who have no knowledge of marketing. For this reason, the public agro-industrial CITEs have an inefficient commercial management, which is reflected in the low reach of the services they offer, the small number of customers, and a low degree of customer satisfaction. In such regard, the main research problem was proposed as: To what extent do the design and implementation of the 7 Ps of marketing influence the commercial performance of public agro-industrial CITEs in Peru?

In relation to the marketing mix, Arellano (2010) states that “en los años 60 Jerome McCarthy propuso la existencia de lo que llamó las 4 P’s del Marketing que incluían las variables de Producto, Precio, Punto de venta y Publicidad”

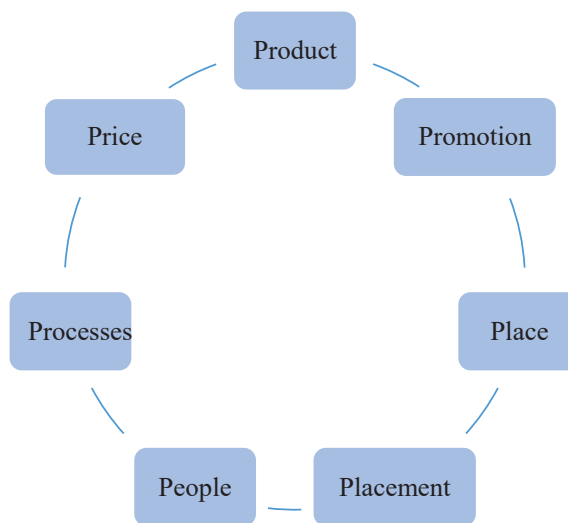
[in the 1960s, Jerome McCarthy proposed the existence of what he termed the 4 Ps of marketing, which included variables Product, Price, Place, and Promotion] (pp. 121-122). Where:

- The P for Product represents what the organization produces and delivers to the consumer.
- The P for Price represents what the customer delivers to the organization in exchange for the product or service.
- The P for Place represents what makes the product reach the consumer.
- The P for Promotion represents all means of communication used by the company to make its product or service known.

Reinforcing the composition of the four variables in the marketing mix, Kotler and Armstrong (2017a) state that “las cuatro P del marketing son el producto, precio, plaza y promoción” [the four Ps of marketing are product, price, place, and promotion] (p. 51).

However, as stated on the Toolshero website (n.d.), the traditional 4 Ps of marketing have been extended by Bernard H. Booms and Mary J. Bitner to the 7 Ps of marketing, after adding the P for People, the P for Processes, and the P for Physical Evidence (see Figure 1).

**Figure 1**  
*The 7 Ps of marketing*



Note. Adapted from Toolshero, n.d.

- The P for People represents the image and way in which contact staff deal with customers.
- The P for Processes represents the activities, procedures and protocols to deal with customers.
- The P for Physical evidence (Placement) represents the “entorno en el que un servicio se produce a partir de una interacción entre un empleado y un cliente” [environment in which a service is provided from an interaction between an employee and a customer] (Toolshero, n.d.), to be demonstrated through physical evidence.

Reinforcing the composition of the 7 Ps of marketing, the thesis by Bacilio *et al.* (2022) states that “las 7 P's del marketing son el producto, precio, plaza, promoción, personas, procesos y evidencia física” [the 7 Ps of marketing are product, price, place, promotion, people, processes, and physical evidence] (pp. 17-18).

In relation to commercial management, we agree with Villanueva and Manuel de Toro (2018) in that it is necessary to conduct commercial research, not only to meet the clients, but to retain them. Other authors also state that, to generate exchanges of goods and services which are satisfactory for customers, it is necessary to apply marketing strategies (Yépez Galarza *et al.*, 2021). In addition, market segmentation is necessary because it helps target the marketing strategies to a group of customers with common characteristics (Navarro Palacios and Muñoz Rodríguez, 2015). This information is reinforced by Escudero (2011), who states that “para que un producto se pueda vender solo, el especialista de marketing debe de ajustar las necesidades del cliente a la elaboración del producto o servicio” [for a product to sell by itself, the marketing specialist must adjust the customers' needs to the production of the product or service] (p. 70). Castelló (2007) also states that “para reducir el riesgo al fracaso, los especialistas del marketing deben de estructurar la oferta (producto o servicio) en función de las necesidades de sus clientes” [to reduce the risk of failure, marketing specialists must structure the product or service offered in relation to the customers' needs] (p. 121). Other

authors have stated that “las investigaciones de mercados te proporcionan mayor confianza y certeza para el diseño del marketing mix” [market research provides better trust and accuracy in the design of the marketing mix] (Ortiz Delgado *et al.*, 2015, p. 6) (see Figure 2).

## **METHOD**

This research has an explanatory level because it explains the impact that the implementation of the 7 Ps of marketing had on the commercial performance of agro-industrial CITEs. In addition, the research was conducted in a longitudinal period between 2018 and 2019, and has an experimental design because in 2019, the 7 Ps of marketing were designed and implemented in the agro-industrial CITEs.

In addition, the following method was used:

### **Step 1. A situational analysis was conducted**

The situational analysis was conducted at CITE Huallaga UT Ambo, located in Huánuco, and CITE Agroindustrial UT Huaura, located in Huaura, where the main crops grown are products related to the fruit supply chain.

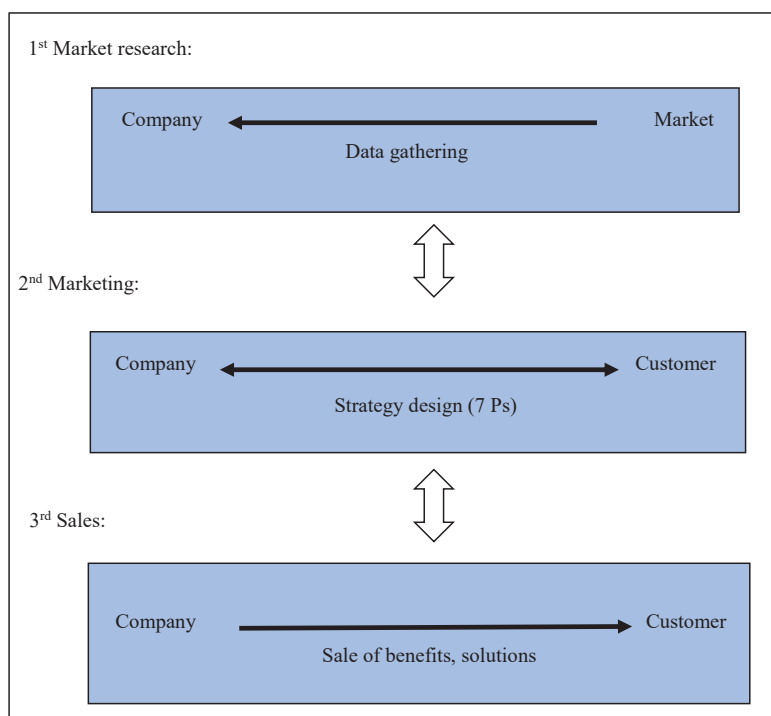
This situational analysis helped prepare the SWOT matrix (strengths, weaknesses, opportunities, threats) for both CITEs. We therefore agree with Quico (2011) in that one is ready to prepare the SWOT matrix once an external and an internal analysis of the products and services has been carried out (p. 37).

### **Step 2. The needs and wants of the agro-industrial CITEs' target audience were investigated.**

To this end, a survey was administered to 51 companies from the agro-industrial sector, 17 of which are commercial customers of CITE Huallaga UT Ambo, while 34 are commercial customers of CITE Agroindustrial UT Huaura.

We therefore coincide with Lovelock and Wirtz (2015) in that market research surveys should be representative and reliable so that they evaluate the company's relative position in relation to quality goals, and the employees who provide the service (pp. 390-391).

**Figure 2**  
*Process of commercial management*



*Note. Prepared by the author, 2023.*

### Step 3. The strategies for the 7 Ps of marketing were designed.

The marketing mix (7 P) strategies were designed in April 2019 for the CITE Huallaga UT Ambo and the CITE Agroindustrial UT Huaura. To this end, the results of the situational analysis and the market research were considered. We therefore agree with Sainz de Vicuña (2014) in that marketing tasks should have market orientation, not only dealing with customers but also with competitors, distributors, socioeconomic aspects and the inter-functional coordination of the company (p. 48).

Once the marketing mix activities were designed, a meeting was held with the teams in charge of both of the CITEs analyzed to present the final results. This eventually helped obtain a final version of the 7 Ps of marketing which included contributions, priorities, and limiting factors for the execution of these strategies. We therefore agree with several authors in that one of the most important factors influencing the design and execution of marketing tasks is “la organización misma, cuya misión determina

a qué se dedica y cuáles son sus objetivos” [the organization itself, whose mission determines what it does and what objectives it has] (Kerin y Hartley, 2018, p. 5).

### Step 4. The commercial management results of agro-industrial CITEs were analyzed.

- A comparison was made between the results of services performed and the number of customers served in 2018 versus 2019 at CITE Huallaga UT Ambo.
- A comparison was made between the results of services performed and the number of customers served in 2018 versus 2019 at CITE Agroindustrial UT Huaura.
- A comparison was made between the results of services performed and the number of customers served by the CITEs that had the 7 Ps of marketing designed for them, versus the CITEs that did not.

## RESULTS

This research helped design marketing mix strategies for both agro-industrial CITEs analyzed, which contributed to improving the number of services performed and increasing the number of customers served.

The design of the 7 Ps of marketing implemented in both CITEs is detailed below:

### Product strategies

- **Service prioritization for business service indicators.** The CITEs focused their efforts on promoting services that contributed to improving the indicators related to the number of companies served. This included training and technical assistance to ensure that the objectives defined by ITP would be achieved.
- **Use of facilities and competitive advantage.** As part of a competitive strategy, the use of CITE facilities was maximized. Also, the image and capabilities of their laboratories were used as a differential advantage in the promotional strategy.
- **Review of the satisfaction measurement.** The discrepancy between internal perceptions and customers' opinions highlights the need to review the methods and tools used to measure satisfaction.

### Place strategies

- **Market awareness and understanding.** All the employees understood the socio-demographic profile of their target audience. The correlation between regional economic-financial development and the use of technology by agro-industrial companies, which highlights its importance for business success. In addition, opportunity was identified in the business objectives and problems, especially in the opening of new markets. The technical-productive aspect of CITEs is presented as a solution to address this need.
- **Segmentation and service prioritization.** Service to small and medium-sized enterprises is prioritized because this market segment is able to absorb a wide range of technological services. The importance of

serving micro and small-sized enterprises is also highlighted.

- **Identification and articulation with competitors, suppliers and government programs.** Market competitors were identified, as well as similar government institutions for strategic collaboration for the benefit CITEs and agro-industrial companies. This collaboration offered opportunities to cross-promote services and collaborative strategies.
- **Focus on company employees.** The importance of attending to the workers of the CITEs was emphasized, as this is a segment that needs development and training, especially operators.

### Promotion strategy

- **Cross-promotion for sales efficiency.** The cross-promotion of services among the center's various areas was reinforced. This requires the entire technical team to be able to promote the services offered by other areas.
- **Consolidation of advertising pieces.** All the promotion and advertising pieces were jointly prepared. These materials will be released throughout the year to speed up the approval process and to prevent delays in the ITP's centralized procedures.
- **Including purchase motivations in communications.** Both the internal (self-improvement, ambition) and external (buyers' demands) factors must be used in the communication strategy to highlight the service value.
- **Expand the latent demand.** Many businesspeople have not leveraged technological services, mainly due to their lack of understanding of their importance, and to the lack of reliable suppliers. Specific actions were carried out to address these problems.
- **Optimization of business testimonials** Business testimonials were effectively used. Given the sectorial approach of the businesspeople, a bank of testimonials from different sectors was created to impact specific audiences and increase the effectiveness of the promotion.

### Price strategy

- A new price proposal was presented for the new services that would become part of the CITE product portfolio. These are within the limits established by the Single Text of Administrative Procedures (TUPA by its Spanish initials) of each CITE.

### Personnel strategy

- **Strengthening commercial capabilities.** The aim was to improve the basic business skills of the technical team, given that CITEs operate in the professional service sub-sector, where the quality of service depends to a large extent on the personnel.
- **Recognition based on customers' evaluation** Recognition to employees was mainly based on their job performance, which was evaluated by the businesspeople through the application of surveys.
- **Inclusion of an innovation project development service.** To this end, strategic alliances were agreed with other agro-industrial CITEs to implement innovative projects in the product portfolio.

### Process strategy

- The CITEs' processes were identified and improved. The employees were trained on

how to serve customers, and the necessary resources were allocated to the personnel so that the customer service process application becomes effective.

### Physical evidence (*placement*) delivery

- The furniture and infrastructure of the premises were given treatment, the appearance of the customer service platform was improved, a positive attitude was developed in the contact personnel, the CITE brand was revalued, the CITE social media accounts were redesigned, and the positioning of the culture and values of the CITE was reinforced.

Through the implementation of the 7 Ps of marketing in the above-mentioned CITEs, the following commercial results were achieved:

### Commercial results in regard to services performed by the CITEs which had the 7 P developed for them.

Table 1 shows a 45% increase in the services performed by CITE UT Agroindustrial Ambo in 2019, compared to the year 2018.

Table 2 shows an 81% increase in the services performed by CITE UT Agroindustrial Huaura in 2019, compared to the year 2018.

**Table 1**

*Number of services performed by CITE UT Agroindustrial Ambo*

Years	Services performed by CITE UT Agroindustrial Ambo		Increase	
2018	566	27%		
2019	1501	73%	935	45%
Total	2067	100%		

*Note.* Adapted from Table 70, Results of services performed by agro-industrial CITEs in 2017, 2018 and 2019. Velásquez Díaz, 2023.

**Table 2**

*Number of services performed by CITE UT Agroindustrial Huaura*

Years	Services performed by CITE UT Agroindustrial Huaura		Increase	
2018	435	10%		
2019	4100	90%	3665	80%
Total	2067	100%		

*Note.* Adapted from Table 70, Results of services performed by agro-industrial CITEs in 2017, 2018 and 2019. Velásquez Díaz, 2023.

### Commercial results in terms of the number of clients of CITEs that had the 7 Ps designed

Table 3 shows a 6% increase in the number of clients served by CITE UT Agroindustrial Ambo in 2019 compared to 2018.

Table 4 shows a 6% increase in the number of clients served by CITE UT Agroindustrial Huaura in 2019 compared to 2018.

### Commercial results in relation to the services performed by CITEs that had the 7 Ps designed versus other agro-industrial CITEs

Figure 3 shows that, between 2018 and 2019, there was a good increase in the number of services performed by CITE UT Ambo and CITE Agroindustrial Huaura, which had implemented the 7 Ps of marketing, versus the other agro-industrial CITEs.

**Table 3**

Number of clients served by CITE UT Agroindustrial Ambo

Years	Clients served by CITE UT Agroindustrial Ambo		Increase	
2018	386	47%		
2019	438	53%	52	6%
Total	824	100%		

Note. Adapted from Table 73, Results of number of clients served in 2017, 2018 and 2019. Velásquez Díaz, 2023.

**Table 4**

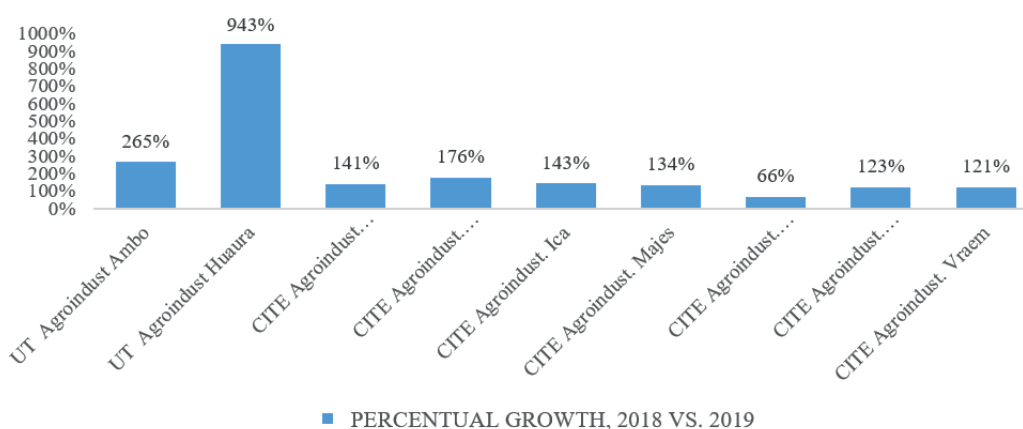
Number of clients served by CITE UT Agroindustrial Huaura

Years	Services performed by CITE UT Agroindustrial Huaura		Increase	
2018	290	47%		
2019	326	53%	36	6%
Total	316	100%		

Note. Adapted from Table 73, Results of number of clients served in 2017, 2018 and 2019. Velásquez Díaz, 2023.

**Figure 3**

Percentual growth in the number of services performed by agro-industrial CITEs between 2018 and 2019



Note. Taken from Figure 63, Percentual growth in the number of services performed by agro-industrial CITEs between 2018 and 2019. Velásquez Díaz, 2023..

**Commercial results in relation to the number of clients served by CITEs which had the 7 Ps designed versus other agro-industrial CITEs**

Figure 4 shows that, between 2018 and 2019, there was a high increase in the number of clients served by CITE UT Ambo and CITE Agroindustrial Huaura, which had implemented the 7 Ps of marketing, versus the other agro-industrial CITEs.

**DISCUSSION**

Kotler and Armstrong (2017b) state that successful sales result from a marketing specialist designing the marketing mix strategies in relation to the clients’ needs and wants (p. 5). Therefore, this study argues, through its results, that marketing specialists should not only consider the 4 Ps of marketing but the 7 Ps of marketing, because the strategy design becomes more complete and, especially, because it recognizes the importance of People, Procedures for client service, and the Place where the client is served, in order to persuade clients to buy the company’s products or use the company’s services.

The results of this study show that they coincide with what is stated by Villanueva and Manuel de Toro (2018), who indicate the importance of commercial research to learn

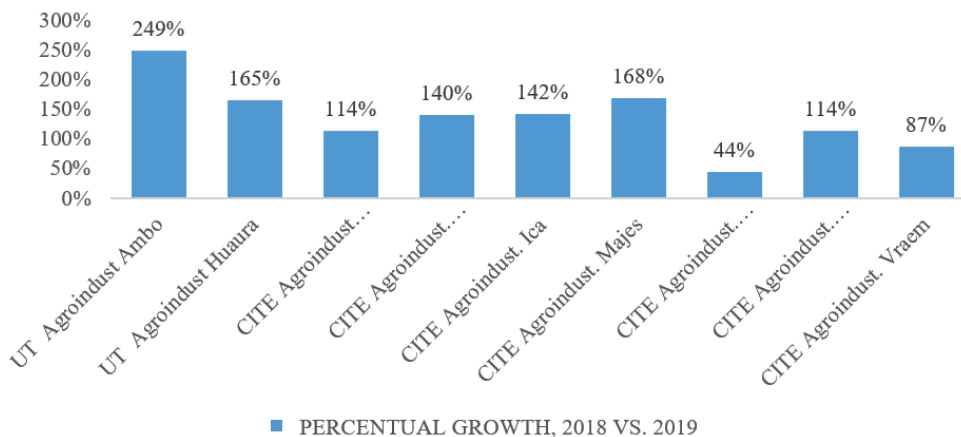
about the clients and to retain them, and other authors who claim that market research bring more certainty to the design of the marketing mix (Ortiz Delgadillo *et al.*, 2015, p. 6) because the marketing strategies designed and implemented by the agro-industrial CITEs came as a result of market research conducted with its target audience.

**CONCLUSIONS**

- The implementation of the 7 Ps of marketing positively influenced the commercial management of agro-industrial CITEs in relation to the placement of technological services in agro-industrial companies from Peru, with the purpose of enhancing their competitiveness.
- For the design of the 7 Ps of marketing to be effective, it is necessary to consider the results of market research because it will provide valuable information on the clients’ needs and wants. The results of the situational analysis of CITEs must also be considered, in order to learn their strengths, weaknesses, opportunities, and threats.
- To enhance the CITEs’ commercial performance, it is not enough to offer the best product or service. It is important to know how to sell it; this is why it is advisable to use an effective commercial management

**Figure 4**

*Percentual growth in the number of clients served by agro-industrial CITEs between 2018 and 2019*



*Note.* Taken from Figure 64, Percentual growth in the number of clients served by agro-industrial CITEs between 2018 and 2019. Velásquez Díaz, 2023.



process considering the gathering of market data. This information helps design the 7 Ps of marketing as strategies, and then the necessary sales techniques are used to let the clients know that, if they purchase our products or services, they will be able to solve their problems in relation to operations management.

- Peruvian CITEs that serve various business sectors must have marketing specialists to ensure better commercial performance. Marketing specialists study market behavior and consumer needs. They also show the capability, creativity and necessary knowledge to persuade clients to purchase the CITEs' products and services.
- Given that we are now living in a virtual era, it is advisable to investigate the degree of influence that artificial intelligence use may have in the competitiveness of CITEs in the agro-industrial sector.

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### Conflicts of interest

The authors have no conflicts of interest to declare.

### Author contributions

Johannes Schmidt Urdanivia (lead author): formal analysis, research, methodology, supervision, validation, data visualization, writing (original draft, reviewing and editing).

Cecilia del Carmen Velásquez Diaz (co-author): conceptualization, formal analysis, research, methodology, writing (original draft, reviewing and editing).